AMENDMENTS TO THE CLAIMS

IN THE CLAIMS:

Claim 1 (currently amended) A thermoplastic polyurethane comprising the reaction product of:

a polyol component including a randomly polymerized polyether polyol having at least 75 percent by weight of propylene oxide repeat units and having a high secondary hydroxyl group content of about 51 to about 100 percent based on the total number of hydroxyl group present in said high secondary polyether polyols, and wherein the number average molecular weight of said polyol component is from about ~~700~~ 800 to about ~~2,500~~ 1,500, and wherein said polyol component has a hydroxyl functionality of from about 1.8 to about 2.2;

a polyisocyanate;

a chain extender; and

a polyurethane catalyst,

and wherein said thermoplastic polyurethane has a molecular weight of from about 75,000 to about 400,000 weight average.

Claim 2-3 (cancelled).

Claim 4 (currently amended) The thermoplastic polyurethane according to claim ~~3~~ 1, wherein said polyol component includes in an amount up to about 50 weight percent of a polyol having low secondary hydroxyl group content, and wherein said high secondary polyether polyol has been derived in the presence of a double metal cyanide catalyst.

Claim 5 (original) The thermoplastic polyurethane according to claim 4, wherein the mole ratio of polyisocyanate functional groups to hydroxyl functional groups of the polyol component and the chain extender is from about 0.95 to about 1.10.

Claim 6 (original) The thermoplastic polyurethane according to claim 5, wherein said polyisocyanate comprises diphenylmethane-4,4'-diisocyanate (MDI), or methylene *bis*(4-cyclohexylisocyanate), or combinations thereof, and wherein said chain extender is 1,4-butanediol, ethylene glycol, diethylene glycol, 1,6-hexane diol, 1,4-cyclohexanedimethanol (HQEE), 1,4-benzenedimethylol, or combinations thereof.

Claim 7 (cancelled).

Claim 8 (currently amended) The thermoplastic polyurethane according to claim ~~3~~ 1, wherein said thermoplastic polyurethane has a molecular weight from about 125,000 to about 300,000, wherein said high secondary polyether polyol has a secondary hydroxyl group content of about 65 to about 90%, and wherein the mole ratio of polyisocyanate functional groups to hydroxyl functional groups of the polyol component and the chain extender is from about 0.98 to about 1.03.

Claim 9 (previously amended) The thermoplastic polyurethane according to claim 1, wherein said polyol component has hydroxyl functionality of from about 1.95 to about 2.05.

Claim 10 (previously amended) The thermoplastic polyurethane according to claim 1, wherein said polyol component includes less than or equal to 15 weight percent of said polyol having low secondary hydroxyl group content, and wherein said polyurethane catalyst is present in an amount from about 20 to about 500 parts by weight per million parts by weight of the total weight of said polyisocyanate, said polyol component, and said chain extender.

Claim 11 (previously amended) The thermoplastic polyurethane according to claim 1, wherein said thermoplastic polyurethane has a molecular weight from about 150,000 to about 250,000.

Claim 12 (original) The thermoplastic polyurethane according to claim 1, wherein said polyurethane is in the form of a film having a thickness from about 0.5 mils to about 10 mils.

Claim 13 (original) The thermoplastic polyurethane according to claim 12, wherein said polyurethane film has a moisture vapor transmission rate greater than 2,000 grams per square meter per day.

Claims 14-15 (cancelled).

Claim 16 (currently amended) A polyurethane composition, comprising:

a polyol component including a randomly polymerized polyether polyol having at least 75 percent by weight of propylene oxide repeat units and having a high secondary hydroxyl group content of about 51 to about 100 percent based on the total number of hydroxyl groups present in said high secondary polyether polyol, and wherein the number average molecular weight of said polyol component is from about ~~700~~ 800 to about ~~2,500~~ 1,500, and wherein said polyol component has hydroxyl functionality of from about 1.8 to about 2.2;

a polyisocyanate;

a chain extender; and

a polyurethane catalyst,

said polyurethane being a thermoplastic substantially free of cross-links,

and wherein said thermoplastic polyurethane has a molecular weight of from about 75,000 to about 400,000 weight average.

Claim 17-18 (cancelled).

Claim 19 (currently amended) The polyurethane composition according to claim ~~18~~ 16, wherein said polyol component includes up to about 50 weight percent of a polyol having low secondary hydroxyl group content, and wherein said high secondary polyether polyol has been derived in the presence of a double metal cyanide catalyst.

Claim 20 (original) The polyurethane composition according to claim 19, wherein the mole ratio of polyisocyanate functional groups to the total hydroxyl functional groups of the polyol component and the chain extender is from about 0.95 to about 1.10.

Claim 21 (original) The polyurethane composition according to claim 20, wherein said polyisocyanate comprises diphenylmethane-4,4'-diisocyanate (MDI), or methylene *bis*(4-cyclohexylisocyanate), or combinations thereof, and wherein said chain extender is 1,4-butanediol, ethylene glycol, diethylene glycol, 1,6-hexane diol, 1,4-cyclohexanedimethanol (HQEE), 1,4-benzenedimethylol, or combinations thereof.

Claim 22 (cancelled).

Claim 23 (currently amended) The polyurethane composition according to claim ~~18~~ 16, wherein said thermoplastic polyurethane has a molecular weight from about 125,000 to about 300,000, wherein said high secondary polyether polyol has a secondary hydroxyl group content of about 65 to about 90%, and wherein the mole ratio of polyisocyanate functional groups to the total hydroxyl functional groups of the polyol component and the chain extender is from about 0.98 to about 1.03.

Claim 24 (previously amended) The polyurethane composition according to claim 16, wherein said polyol component has a hydroxyl functionality of from about 1.95 to about 2.05.

Claim 25 (previously amended) The polyurethane composition according to claim 16, wherein said polyol component includes less than or equal to 15 weight percent of said polyol having low secondary hydroxyl group content, and wherein said polyurethane catalyst is present in an amount from about 20 to about 500 parts by weight per million parts by weight of the total weight of said polyisocyanate, said polyol component, and said chain extender.

Claim 26 (previously amended) The polyurethane composition according to claim 16, wherein said thermoplastic polyurethane has a molecular weight from about 150,000 to about 250,000.

Claim 27 (original) The polyurethane composition according to claim 16, wherein said polyurethane has been formed into a film having a thickness from about 0.5 mils to about 10 mils.

Claim 28 (original) The polyurethane composition according to claim 27, wherein said polyurethane film has a moisture vapor transmission rate greater than 2,000 grams per square meter per day.

Claims 29-30 (cancelled).

Claim 31 (currently amended) A process for preparing a thermoplastic polyurethane composition, comprising:

reacting in substantially a single step a composition comprising:

a polyol component including a randomly polymerized polyether polyol having at least 75 percent by weight of propylene oxide repeat units and having a high secondary hydroxyl group content of about 51 to about 100 percent based on the total number of hydroxyl group present in said polyether polyol, and wherein the number average molecular weight of said polyol component is from about ~~700~~ 800 to about ~~2,500~~ 1,500, and wherein said polyol component has hydroxyl functionality of from about 1.8 to about 2.2;

a polyisocyanate;

a chain extender; and

a polyurethane catalyst,

wherein said thermoplastic polyurethane is substantially linear, and wherein said thermoplastic polyurethane has a molecular weight of from about 75,000 to about 400,000 weight average.

Claims 32-33 (cancelled).

Claim 34 (currently amended) The process for preparing a thermoplastic polyurethane composition according to claim ~~33~~ 31, wherein said polyol component includes up to about 50 weight percent of a polyol having low secondary hydroxyl group content, and wherein said high secondary polyether polyol has been derived in the presence of a double metal cyanide catalyst.

Claim 35 (original) The process for preparing a thermoplastic polyurethane composition according to claim 34, wherein the mole ratio of polyisocyanate functional groups to the total hydroxyl functional groups of the polyol component and the chain extender is from about 0.95 to about 1.10.

Claim 36 (original) The process for preparing a thermoplastic polyurethane composition according to claim 35, wherein said polyisocyanate comprises diphenylmethane-4,4'-diisocyanate (MDI), or methylene *bis*(4-cyclohexylisocyanate), or combinations thereof, and wherein said chain extender is 1,4-butanediol, ethylene glycol, diethylene glycol, 1,6-hexane diol, 1,4-cyclohexanedimethanol (HQEE), 1,4-benzenedimethylol, or combinations thereof.

Claim 37 (cancelled).

Claim 38 (currently amended) The process for preparing a thermoplastic polyurethane composition according to claim ~~33~~ 34, wherein said thermoplastic polyurethane has a molecular weight from about 125,000 to about 300,000, wherein said high secondary polyether polyol has a secondary hydroxyl group content of about 65 to about 90%, and wherein the mole ratio of polyisocyanate functional groups to the total hydroxyl functional groups of the polyol component and the chain extender is from about 0.98 to about 1.03.

Claim 39 (previously amended) The process for preparing a thermoplastic polyurethane composition according to claim 38, wherein said polyol component has a hydroxyl functionality of from about 1.95 to about 2.05.

Claim 40 (previously amended) The process for preparing a thermoplastic polyurethane composition according to claim 39, wherein said polyol component includes less than or equal to 15 weight percent of said polyol having low secondary hydroxyl content, and wherein said polyurethane catalyst is present in an amount from about 20 to about 500 parts by weight per million parts by weight of the total weight of said polyisocyanate, said polyol component, and said chain extender.

Claim 41 (original) The process for preparing a thermoplastic polyurethane composition according to claim 40, wherein said thermoplastic polyurethane has a molecular weight from about 150,000 to about 250,000.

Claim 42 (original) The process for preparing a thermoplastic polyurethane composition according to claim 41, wherein said polyurethane has been formed into a film having a thickness from about 0.5 mils to about 10 mils.

Claim 43 (original) The process for preparing a thermoplastic polyurethane composition according to claim 42, wherein said polyurethane film has a moisture vapor transmission rate greater than 2,000.

Claims 44-45 (cancelled).